

CLAIM AMENDMENTS

1 - 57. (canceled)

1 58. (currently amended) A method of filling a row of
2 bags, the method comprising the steps of:

3 a) conveying the row of bags horizontally until one of
4 the bags is open upward into alignment underneath a filling
5 apparatus;

6 b) stopping the one bag underneath the filling apparatus
7 and, while the one bag is stopped underneath the apparatus and
8 without vertical displacement of the one bag, thereafter
9 sequentially

10 c) shifting the apparatus from a position wholly above
11 the one stopped bag into a position opening inside the one stopped
12 bag generally at a base of the one stopped bag;

13 ~~c) pouring bulk material from the apparatus into the one~~
14 ~~stopped bag~~ d) while simultaneously raising the apparatus upward
15 ~~until the one stopped bag is generally full and to a predetermined~~
16 ~~upper position is reached with the apparatus still engaged in the~~
17 ~~one stopped bag~~

18 d') pouring a predetermined volume of the material
19 into the one stopped bag and thereafter

20 d'') monitoring a weight of the one stopped bag and
21 pouring the material into the one stopped bag

22 until the bag's weight reaches a predetermined
23 desired weight;

24 e) stopping pouring of the material from the apparatus
25 when the ~~upper position is reached~~ bag's weight reaches the
26 predetermined desired weight;

27 f) lifting the apparatus out of the one stopped bag;

28 g) thereafter displacing the one stopped bag horizontally
29 out from underneath the apparatus; and

30 h) repeating steps a) through g) with the next bag in the
31 succession row of bags.

1 59. (previously presented) The bag-filling method
2 defined in claim 58 wherein the bags are conveyed at a fixed height
3 without substantial vertical displacement.

1 60. (previously presented) The bag-filling method
2 defined in claim 58 wherein the apparatus is shifted down into the
3 bag at a speed different from that at which it is raised in the
4 bag.

61. (canceled)

1 62. (currently amended) The bag-filling method defined
2 in claim [[61]] 58 wherein during step d') the material is poured
3 at a greater volume/time rate than during step d").

1 63. (previously presented) The bag-filling method
2 defined in claim 58, further comprising the step of:

3 i) sealing the bags in a sealing station downstream of
4 the filling apparatus.

1 64. (previously presented) The bag-filling method
2 defined in claim 58, further comprising prior to step c) the step
3 of

4 b') laterally squeezing the bags to open same.

1 65. (currently amended) The bag-filling method defined
2 in claim 64 wherein the bags are laterally squeezed by being
3 ~~gripped at~~ gripping opposite edges of the bags and then pushing the
4 gripped opposite edges toward each other.

1 66. (previously presented) The bag-filling method
2 defined in claim 58, further comprising the step of
3 aspirating dust from the bag at the filling apparatus.

1 67. (currently amended) An apparatus for filling a row
2 of bags, the apparatus comprising:

3 a filler having a downwardly open tube with a vertically
4 displaceable lower end;

5 discharge means for pouring bulk material down through
6 the tube;

7 transport means for conveying the row of bags
8 horizontally in steps underneath the tube while holding the bags
9 against vertical displacement;

10 drive means for shifting the tube between a position
11 wholly above the bags and a position opening inside the bags
12 generally at a base of the one stopped bag;

13 means for monitoring a weight of a bag underneath the
14 tube; and

15 control means connected to the transport means, discharge
16 means, weight-monitoring means, and drive means for, when each bag
17 is stopped underneath the tube, sequentially

18 a) stopping each bag underneath the filler tube and
19 holding the bag against vertical movement,

20 ~~b) pouring bulk material from the tube into the stopped~~
21 ~~bag through the tube while simultaneously raising~~
22 ~~the tube upward until the stopped bag is generally~~
23 ~~full and the tube reaches a predetermined upper~~
24 position still engaged in the stopped bag

- 25 b') pouring a predetermined volume of the
26 material into the one stopped bag and
27 thereafter
28 b") monitoring a weight of the one stopped bag
29 and pouring the material into the one
30 stopped bag until the bag's weight reaches
31 a predetermined desired weight,
32 c) stopping pouring of the material from the tube when
33 the upper position is reached bag's weight reaches
34 the predetermined desired weight,
35 d) lifting the tube out of the stopped bag, and
36 e) stepping the row of bags horizontally and thereby
37 displacing the filled bag horizontally out from
38 underneath the apparatus until the next bag in the
39 succession row of bags is stopped underneath the
40 tube; and
41 f) repeating steps a) through e) sequentially with the
42 next bag stopped underneath the tube.

1 68. (previously presented) The bag-filling apparatus
2 defined in claim 67 wherein the filler has a hopper for the bulk
3 material.

1 69. (previously presented) The bag-filling apparatus
2 defined in claim 67 wherein the filler has
3 a frame;
4 a drive motor on the frame; and
5 a transmission connecting the drive motor to the tube.

1 70. (previously presented) The bag-filling apparatus
2 defined in claim 67 wherein the drive means is of variable speed.

1 71. (previously presented) The bag-filling apparatus
2 defined in claim 70 wherein the drive means shifts the tube
3 downward at a faster speed than it uses to shift the tube upward.

72. (canceled)

1 73. (currently amended) The bag-filling apparatus
2 defined in claim [[61]] 67 wherein during step [[d'']] b') the
3 material is poured at a greater volume/time rate than during step
4 [[d'']] b'').

1 74. (previously presented) The bag-filling apparatus
2 defined in claim 67, further comprising
3 means for sealing the bags in a sealing station
4 downstream of the filler.

1 75. (previously presented) The bag-filling apparatus
2 defined in claim 67, further comprising
3 means for laterally squeezing the bags to open same.

1 76. (currently amended) The bag-filling apparatus
2 defined in claim 75 wherein the means for laterally squeezing
3 includes
4 a pair of grippers engageable at opposite edges [[if]] of
5 the bags and
6 means for pushing the gripped opposite edges toward each
7 other underneath the tube.

1 77. (previously presented) The bag-filling apparatus
2 defined in claim 67, further comprising
3 means for aspirating dust from the bag at the filling
4 apparatus.

1 78. (new) A method of filling a row of bags, the method
2 comprising the steps of:

3 a) conveying the row of bags horizontally until one of
4 the bags is open upward into alignment underneath a filling
5 apparatus;

6 b) stopping the one bag underneath the filling apparatus
7 and, while the one bag is stopped underneath the apparatus and
8 without vertical displacement of the one bag, thereafter
9 sequentially

10 c) shifting the apparatus from a position wholly above
11 the one stopped bag into a position opening inside the one stopped
12 bag generally at a base of the one stopped bag;

13 d) while raising the apparatus upward to a
14 predetermined upper position with the apparatus still engaged in
15 the one stopped bag

16 d') pouring a predetermined volume of the material
17 into the one stopped bag at a predetermined
18 high volume/time rate and thereafter

19 d'') monitoring a weight of the one stopped bag and
20 pouring the material into the one stopped bag
21 at a predetermined low volume/time rate smaller
22 than the high rate until the bag's weight
23 reaches a predetermined desired weight;

24 e) stopping pouring of the material from the apparatus
25 when the bag's weight reaches the predetermined desired weight;

26 f) lifting the apparatus out of the one stopped bag;

27 g) thereafter displacing the one stopped bag horizontally
28 out from underneath the apparatus; and

29 h) repeating steps a) through g) with the next bag in the
30 row of bags.